

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ~~compact~~ thermal exchange device for ~~thermo-electric~~ cooling mode, the device comprising:

a planar thermal electric cooling unit having an upper planar side and a lower planar side, comprising ~~two planar plates, wherein each of the planar plates is a first~~ planar plate positioned on the upper planar side and a second planar plate positioned on the lower planar side of the unit, ~~respectively;~~

a housing comprising a first ~~two housing walls, wall and a second housing wall,~~ wherein the first housing wall is ~~each of the housing walls being~~ positioned on the upper side of the thermal electric cooling unit and the second housing wall is positioned on and the lower side of the thermal electric cooling unit, ~~respectively;~~

a first heat pipe positioned within the first planar plate, wherein a predetermined portion of the first heat pipe extends laterally beyond the first planar plate to an exterior of the housing;

a second heat pipe positioned within the second planar plate, wherein a predetermined portion of the second heat pipe extends laterally beyond the second planar plate to an interior of the housing;

~~a plurality of heat pipes, wherein each of the plurality of heat pipes is positioned within a corresponding one of the planar plates, coplanar to the corresponding one of the planar plates, wherein a predetermined portion of each of the plurality of heat pipes extends laterally beyond the corresponding one of the planar plates;~~

a plurality of fins formed on the predetermined portion of each of the heat pipes;

an external fan provided over the fins; and

an internal fan provided under the fins.

2. (Currently Amended) The ~~compact~~ thermal exchange device of Claim 1, wherein ~~each of the first plurality of heat pipe pipes~~ is positioned in the a center of each of the first planar plate, and the second heat pipe is positioned in a center of the second planar plate plates.

3. (Currently Amended) A ~~compact~~ thermal exchange device comprising:
a thermal electric cooling unit ~~formed around a thermal exchange device~~, comprising a first planar plate and a second planar plate, wherein the first planar plate is ~~formed on~~ in a first plane, and ~~a second planar plate, wherein the second planar plate is formed on~~ in a second plane ~~positioned which is below~~ the first plane;

a first housing wall positioned above the first plane;

a second housing wall positioned below the second plane;

a first heat pipe positioned within the first planar plate and extending laterally to ~~[[the]]~~ an exterior of the housing;

a second heat pipe positioned within the second plate and extending laterally to ~~[[the]]~~ an interior of the housing;

a first plurality of fins formed on the first heat pipe, the first plurality of fins extending radially from the first heat pipe; and

a second plurality of fins formed on the second heat pipe, the second plurality of fins extending radially from the second heat pipe.

4. (Previously Presented) The thermal exchange device of Claim 3, further comprising an external fan formed on an upper side of the first plurality of fins.

5. (Previously Presented) The thermal exchange device of Claim 4, wherein the external fan processes an outside air.

6. (Previously Presented) The thermal exchange device of Claim 5, further comprising an internal fan formed on a lower side of the second plurality of fins.

7. (Currently Amended) The thermal exchange device of Claim 6, wherein the internal fan processes the air within the first housing wall and the second housing wall.

8. (Previously Presented) The thermal exchange device of Claim 3, wherein the first plurality of fins is a high-density fin stack.

9. (Previously Presented) The thermal exchange device of Claim 3, wherein the second plurality of fins is a high-density fin stack.